



**BCM & BLCM  
COMBI OVENS  
INSTALLATION - OPERATION - MAINTENANCE**



**BLODGETT OVEN COMPANY**

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Your Service Agency's Address:

\_\_\_\_\_

Model

\_\_\_\_\_

Serial number

\_\_\_\_\_

Oven installed by

\_\_\_\_\_

Installation checked by

## IMPORTANT

**WARNING:** Improper installation, adjustment, alternation, service or maintenance can cause property damage, injury or death. Read the installation, operation and maintenance instructions thoroughly before installing or servicing this equipment.

INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE USER SMELLS GAS MUST BE POSTED IN A PROMINENT LOCATION. This information may be obtained by contacting your local gas supplier.

### FOR YOUR SAFETY

Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.

The information contained in this manual is important for the proper installation, use, and maintenance of this oven. Adherence to these procedures and instructions will result in satisfactory baking results and long, trouble free service. Please read this manual carefully and retain it for future reference.

**ERRORS:** Descriptive, typographic or pictorial errors are subject to correction. Specifications are subject to change without notice.

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# Installation

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## Utility Connections - Standards and Codes

THE INSTALLATION INSTRUCTIONS CONTAINED HEREIN ARE FOR THE USE OF QUALIFIED INSTALLATION AND SERVICE PERSONNEL ONLY. INSTALLATION OR SERVICE BY OTHER THAN QUALIFIED PERSONNEL MAY RESULT IN DAMAGE TO THE OVEN AND/OR INJURY TO THE OPERATOR.

Qualified installation personnel are individuals, a firm, a corporation, or a company which either in person or through a representative are engaged in, and responsible for:

- the installation or replacement of gas piping and the connection, installation, repair or servicing of equipment.
- the installation of electrical wiring from the electric meter, main control box or service outlet to the electric appliance.

Qualified installation personnel must be experienced in such work, familiar with all precautions required, and have complied with all requirements of state or local authorities having jurisdiction.

### U.S. and Canadian installations

The installation must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, or the Natural Gas and Propane Installation Code, CSA B149.1, as applicable.

Installation must conform with local codes, or in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70-Latest Edition and/or Canadian National Electric Code C22.1 as applicable.

Appliance is to be installed with backflow prevention in accordance with applicable federal, province and local codes.

### Australia and general export installations

Installation must conform with Local and National installation standards. Local installation codes and/or requirements may vary. If you have any questions regarding the proper installation and/or operation of your Blodgett oven, please contact your local distributor. If you do not have a local distributor, please call the Blodgett Oven Company at 0011-802-658-6600.





## The Blodgett Combi-Oven/Steamer

The Blodgett Combi-Oven/Steamer offers a completely new method of cooking. With the Oven/Steamer you have the choice of two cooking processes: Steam and Hot Air, either...

- Separately
- Combined, or
- In Sequence

And for easy operation you can choose from three modes:

In the **Steam mode** you can:

steam	reheat	reconstitute
stew	thaw	simmer
blanche	preserve	braise
poach		

In the **Hot Air** mode you can:

roast	bake	grill
gratinat	broil	

In the **Combination Steam and Hot Air** mode you can:

defrost	roast	rethermalize
reheat	bake	forced steam

There are four additional specialized modes to help you make the most of your time:

**Retherm** - for perfect reheating

**Proofing** - Proof and bake all in the same oven

**Preheat** - in this mode the oven will preheat to 575°F (300°C) for 15 minutes. The oven will then automatically lower to 480°F (249°C) to protect the advanced electronic components.

**Cool Down** - allows the oven cavity to cool down rapidly with the door opened

You can also use two or three functions in sequence during one cooking process. We call this:

- combi-steaming
- combi-roasting
- combi-baking

The combination of circulating hot air and steam in the space saving, high performance Combi-Oven/Steamer leads to improvements in the following areas:

- increased productivity in the kitchen
- a reduction in capital expenditures for multiple equipment replacement
- a wider range of menu choices
- a simplified cleaning process

The work process is simplified since products are prepared on or in steam table pans and trays. Food can be cooked, stored, and transported with the same pans. Small amounts of product can be processed efficiently; pre-cooked and convenience foods can be reheated within minutes. Many frozen foods can be processed without pre-thawing. This flexibility in preparation reduces the need for kettles and steam tables since there is no need for large amounts of food to be kept warm for long periods of time.

Today the improvement of food quality is more important than ever. Vegetables are cooked in the Blodgett Combi-Oven/Steamer without water at the optimal temperature of just under 212°F (100°C), maintaining valuable vitamins, minerals, nutrients and trace elements. Cooking meat in the Combi results in less shrinkage and a firmer, juicier product. The Blodgett Combi-Oven/Steamer is being used more and more for baking. Steam and Hot Air modes make it a general purpose baking appliance.



# Installation

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## Description of the Combi-Oven/Steamer

### ABOUT THE OVEN/STEAMER

Blodgett Combi-Oven/Steamers are quality produced using high-grade stainless steel with first class workmanship.

The multiple speed fan, which is guarded against accidental finger contact, is driven by a quiet and powerful motor. The condenser draws out excess steam from the appliance. Condensation and waste water, which result during steaming and cleaning, are continuously drained.

The use of high quality insulation impedes excessive heat radiation and saves energy.

The BCM/BLCM makes it possible to enjoy all of the advantages of a high quality steamer at the flick of a switch. Fresh steam enters the oven cavity without pressure and is circulated at high speed. This process enables quick and gentle cooking and ensures high quality food while providing convenient working methods. The steam generator is completely automatic and protected from running dry.

### OVEN/STEAMER OPERATION

The practical oven door, with a viewing window, has a wide swing radius and handle which can be operated easily, even with wet or greasy hands.

Ease of operation is guaranteed through the simple to use control. With graphical symbols and storage for 50 product recipes the BCM/BLCM is easy for even inexperienced kitchen staff to operate.

Cleaning is kept to a minimum thanks to the automatic Combi Wash system.

## Utility Specifications

PLUMBING SPECIFICATIONS	
<b>WATER</b>	
Water pressure	36.26 PSI (250 kPa, 2.5 bar) during Combi Wash 21.76 PSI (150 kPa, 1.5 bar) when Combi Wash is not active 40(min)-50(max) PSI supply pressure
Water connection	3/4" garden hose cold water
Water quality requirements	TDS: 40-125 ppm Hardness: 35-100 ppm Chlorides: <25 ppm Silica: <13 ppm Chlorine: 0 ppm pH: 7.0-8.5
<b>DRAINAGE</b>	
Drain type	Atmospheric Vented Drain
Drain connection	2.00" (50.8mm) Copper
Maximum water drain temperature	140°F (60°C)

RATINGS - GAS OVENS					
Model	Gas Type	Input	Voltage	Phase	Amps
BLCM-61G	Natural	58,000 BTU	115	1	9
	Propane	58,000 BTU	115	1	9
BLCM-101G	Natural	87,000 BTU	115	1	9
	Propane	87,000 BTU	115	1	9
BLCM-102G	Natural	95,500 BTU	115	1	9
	Propane	95,500 BTU	115	1	9
BLCM-62G	Natural	81,800 BTU	115	1	9
	Propane	81,800 BTU	115	1	9
BLCM-202G	Natural	190,000 BTU	115	1	17
	Propane	190,000 BTU	115	1	17



# Installation

## Utility Specifications

ELECTRICAL RATINGS					
Model	Voltage	kW	Hz	Phase	Max Load (amps)
BLCM-23E Mini Combi	208/230/240	2.7/3.3/3.6	50/60	1NAC	15
		2.7/3.3/3.6	50/60	2AC	15
		5.4/6.6/7.2	50/60	3AC	30
	400/415	6.6/7.2	50/60	2NAC	15
		5.4/5.8	50/60	2AC	15
	440/480	5.4/6.5	50/60	2AC	15
BLCM-6E Mini Combi	208	4.6	50/60	1	23
	240	6.1	50/60	1	26
	208	6.9	50/60	3	20
	240	9.2	50/60	3	23
BLCM-10E Mini Combi	208/230/240	10.4/12.7/13.8	50/60	3AC	34
		10.4/12.7/13.8	50/60	3NAC	34
	400/415	12.7/13.8	50/60	3NAC	20
		12.7/13.8	50/60	3AC	20
	440/480	10.4/12.4	50/60	3AC	18
BCM-61E BLCM-61E	208	9	60	3	25
	240	9	60	3	22
	480	9	60	3	11
BCM-101E BLCM-101E	208	18	60	3	50
	240	18	60	3	44
	480	18	60	3	22
BCM-102E BLCM-102E	208	27	60	3	75
	240	27	60	3	65
	480	27	60	3	33
BCM-62E BLCM-62E	208	21	60	3	59
	240	21	60	3	51
	480	21	60	3	26
BCM-202E BLCM-202E	208	60	60	3	167
	240	60	60	3	145
	480	60	60	3	73





## Oven Assembly to Stand

Your Blodgett COMBI oven has been shipped with black plastic caps on the corners of its base. In order to mount your oven to its stand, please do the following:

1. Remove the stand from the packaging. Install the casters or feet into the base of the stand. If inserting casters ensure that the locking casters are at the front of the stand, see figure. Place the stand upright in an area readily available.
2. Remove all packaging from the oven, so that the oven can be picked up.
3. Remove the black plastic caps on each corner by removing the two screws holding them on. Do NOT discard these screws; they will be used to mount the oven to the stand.
4. Position the oven over the stand and align the corner brackets on the stand with the holes on the oven.
5. Use the screws from the plastics caps to mount the oven to the stand.
6. The oven has now been properly fastened to the stand.

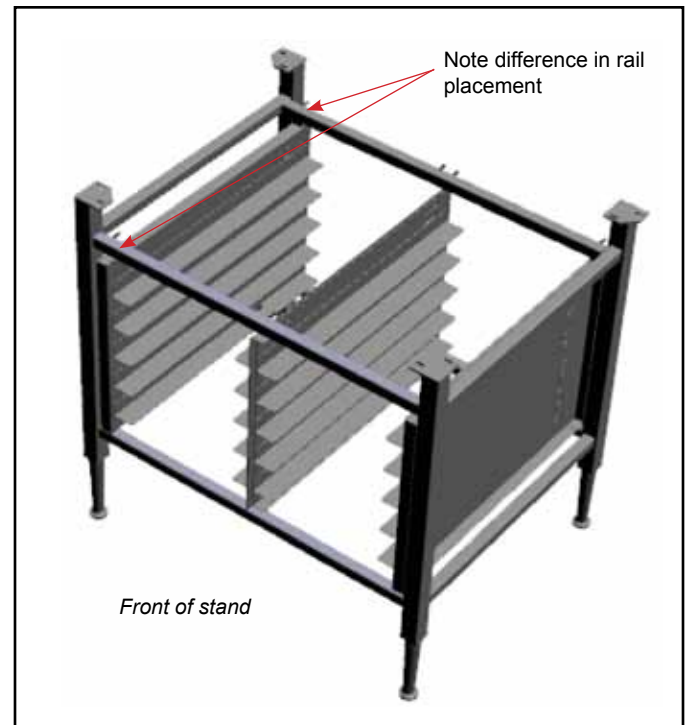


Figure 1



# Installation

## Oven Location and Leveling

The well planned and proper placement of your oven will result in long term operator convenience and satisfactory performance.

Certain minimum clearances must be maintained between the oven and any combustible or non-combustible construction.

Strong sources of heat such as hotplates, tilting frying pans, deep fat fryers, etc. should not be placed near the oven, especially near its right side. An optional side heat shield is available.

In addition, the following clearances are recommended for servicing.

- Oven body sides - 12" (30cm)
- Oven body back - 12" (30cm)

To ensure that the oven functions correctly when installed, it should be placed upright and level (horizontally). This is measured at the front and side edge of the roof. The oven can be levelled using the adjusting screws on the stand or on the legs of table models. The height of the oven should also be adjusted to fit the trolley for rack.

MINIMUM REQUIRED CLEARANCES			
Size	Left	Right	Back
<b>Electric Ovens</b>			
61, 101, 102 & 202	2.75" (70mm)	2.75" (70mm)	2" (50mm)
62	0" (0mm)	4" (102mm)	2" (50mm)
<b>Gas Ovens</b>			
61, 101, 102 & 202	2.75" (70mm)	2.75" (70mm)	2" (50mm)
62	0" (0mm)	4" (102mm)	2" (50mm)

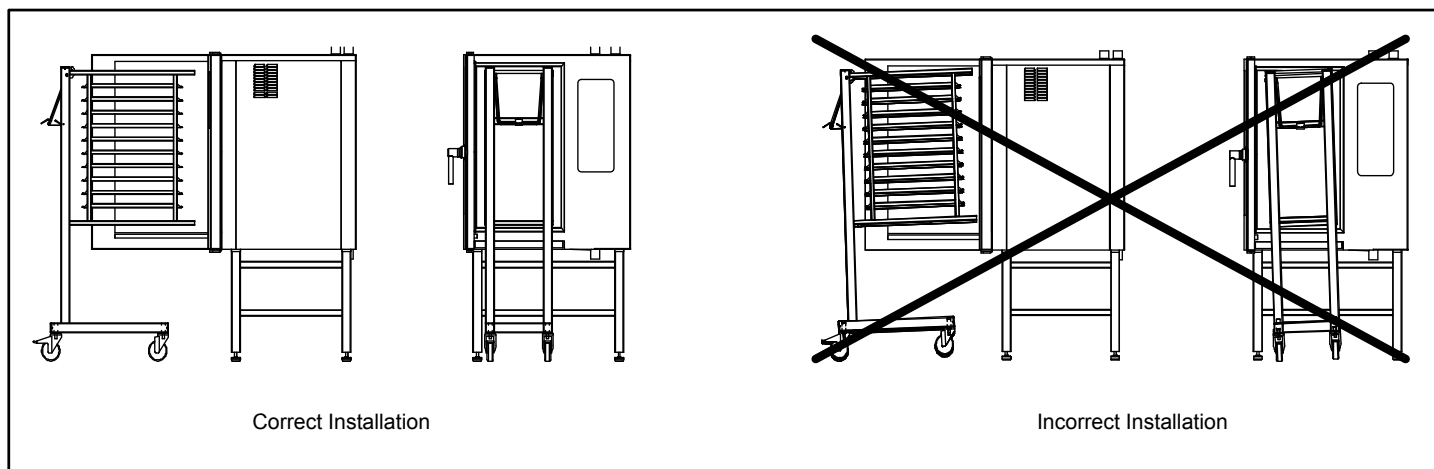


Figure 2



## Plumbing Connections

### WATER CONNECTION

Blodgett BCM/BLCM ovens have two water connections. Both are located at the back of the unit.

#### BCM/BLCM-61, 62, 101, 102 and 202 models

- 1 connection for raw water for the condensation jet.
- 1 connection for steam generation and the Combi Wash jet in the oven chamber. Must meet the requirements applying to water supplied to household appliances.

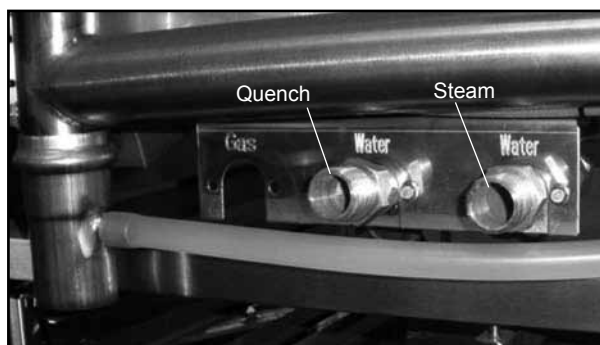


Figure 3

#### BLCM-23, 6 and 10 Mini Combi models

- 1 water connection. Must meet the requirements applying to water supplied to household appliances.



Figure 4

To facilitate cleaning and servicing, the oven should be connected with an approved flexible 3/4" hose. Permanent installations should be fitted with a stop-tap and a non-return valve.

Before connecting the oven to water, flush the tubes thoroughly. Connect the oven.

### DRAIN CONNECTION

Blodgett ovens are equipped with a drain system that removes surplus water from the oven chamber. This may be condensed water from the products, or it may occur when the oven chamber is cooled down with cold water, or when the oven chamber is cleaned.



#### WARNING!!

**Connection must be carried out by an authorised plumber, to an open or closed drain. The drain must never end directly beneath the oven.**

The drain must be of stainless steel or an equally temperature-resistant material, have a diameter of at least 2" (49 mm) and a fall of at least 3° or 5%.



#### WARNING!!

**If the water temperature exceeds 70°F (21°C), problems with regard to Combi Optima calibration and cooling of the oven may occur.**

**The water connection must be carried out by an authorized plumber in accordance with existing local codes.**

**Clogged up water filters and dirt in the solenoid valves are not covered by the warranty.**



# Installation

## Plumbing Connections

### CLEANING & DELIMING CHEMICAL

1. BCM/BLCM-61, 62, 101, 102 and 202 ovens only.  
The oven is supplied with a chemical bottle holder.  
The holder can be affixed to either side of the oven.  
Place it on the stand crossmember.



Figure 5

2. Connect the supplied detergent tubes (red and blue) to the underside of the oven near the rear. Connect the blue hose to the fitting with the blue sticker and the red hose to the fitting with the red sticker.

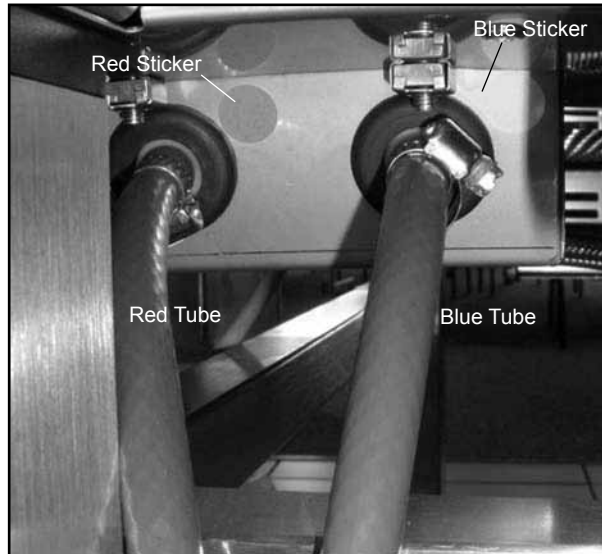


Figure 6

3. Insert the blue and red hoses into the proper bottles.  
Red is for detergent, blue is for rinse aid.
4. BCM only - The last line is for the delimer. This is the tan colored tube protruding from the bottom of the oven. Cut the tubing to the proper length, if needed, and place the tubing into the delime bottle.

*NOTE: If the tube is cut to length, remove the stainless steel weight from the end of the tube and reinsert.*



## Electrical Connection and Ventilation

### ELECTRICAL CONNECTION

**NOTE:** *Electrical connections must be performed by a qualified installer only.*

Before making any electrical connections to these appliances, check that the power supply is adequate for the voltage, amperage, and phase requirements stated on the rating name plate mounted on the appliance.

1. The rating plate is located on the right side of the oven.

An approved plug outlet or a safety cutout must be located close to the oven so that the oven can be disconnected during installation and repair. The safety cutout must be able to cut off all poles with a total distance of break of at least 3 mm.

All appliances must be installed in accordance with Local or National Electrical codes.

The wiring diagram is located in the motor compartment.

**NOTE:** *Disconnect the power supply to the appliance before servicing.*



### **WARNING!!**

**Improper installation may invalidate your warranty.**

### Electric Models

A strain relief for the power supply cord is provided. The installer must supply a cord that meets all Local and National installation standards.

### Gas Models

#### U.S. and Canadian Installations

A power cord (115V units only) is supplied with a plug attached. Plug the power cord into the desired receptacle.

**NOTE:** *The BLCM-202G must be hard wired.*

This oven model uses a variable frequency inverter drive. Appliances that use variable frequency inverter drives produce high frequency noise and require filters and shielded motor cabling. This causes higher leakage current toward Earth Ground. Especially, at the moment of switching ON this can cause an inadvertent trip of the appliance's ground fault interrupter (GFCI). Some GFCIs are more sensitive than others. Blodgett has qualified the Pass and Seymour brand, part number 2095, 20 A, 125 VAC, 60 Hz, specification grade GFCI duplex receptacle as being immune to the variable frequency inverter drive's noise. Blodgett recommends using this specific GFCI for this model oven.



### **WARNING!!**

**If the supply cord is damaged, it must be replaced by a special cord or assembly available from the manufacturer or its service agent.**

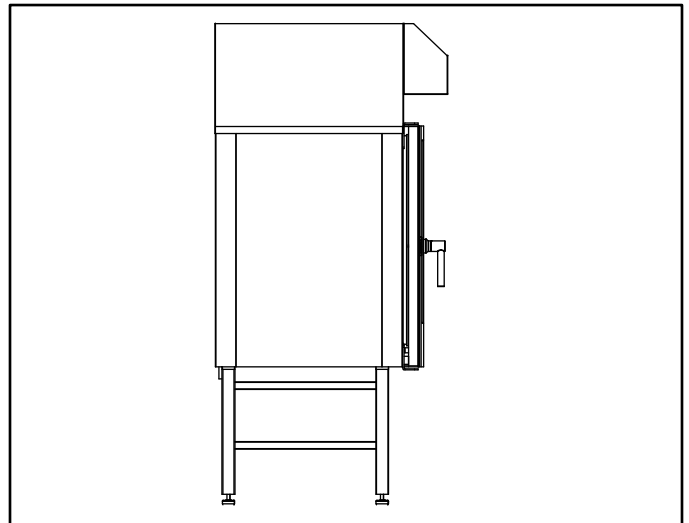
### VENTILATION

Blodgett BCM/BLCM ovens are equipped with an open/direct exhaust system that removes surplus humidity from the oven chamber. The exhaust system has an electrically operated damper.

The ventilation motor can be controlled directly from the oven. This means that the ventilation starts when a program is started and runs for 10 minutes after the program is completed.

The exhaust tube can be connected to a ventilation system. In that case, a special extraction funnel is fitted to avoid suction directly from the oven chamber. This extraction funnel can be ordered from Blodgett.

If an extraction hood is installed in the ceiling above the oven, it should project 20" (50 cm) over the front of the oven.



**Figure 7**



# Installation

## Gas Connection

### GAS PIPING

A properly sized gas supply system is essential for maximum oven performance. Piping should be sized to provide a supply of gas sufficient to meet the maximum demand of all appliances on the line without loss of pressure at the equipment.

Example:

*NOTE: BTU values in the following example are for natural gas.*

You purchase a BLCM-61G to add to your existing cook line.

1. Add the BTU rating of your current appliances.

Pitco Fryer	120,000 BTU
6 Burner Range	60,000 BTU
Deck Oven	50,000 BTU
Total	230,000 BTU

2. Add the BTU rating of the new oven to the total.

Previous Total	230,000 BTU
BLCM-61G	40,900 BTU
New Total	270,900 BTU

3. Measure the distance from the gas meter to the cook line. This is the pipe length. Let's say the pipe length is 40' (12.2 m) and the pipe size is 1" (2.54 cm).

4. Use the appropriate table to determine the total capacity of your current gas piping.

The total capacity for this example is 375,00 BTU. Since the total required gas pressure, 270,900 BTU is less than 375,000 BTU, the current gas piping will not have to be increased.

*NOTE: The BTU capacities given in the tables are for straight pipe lengths only. Any elbows or other fittings will decrease pipe capacities. Contact your local gas supplier if you have any questions.*

### Maximum Capacity of Iron Pipe in Cubic Feet of Natural Gas Per Hour

(Pressure drop of 0.5 Inch W.C.)

PIPE LENGTH (FT)	NOMINAL SIZE, INCHES				
	3/4"	1"	1-1/4"	1-1/2"	2"
10	360	680	1400	2100	3950
20	250	465	950	1460	2750
30	200	375	770	1180	2200
40	170	320	660	990	1900
50	151	285	580	900	1680
60	138	260	530	810	1520
70	125	240	490	750	1400
80	118	220	460	690	1300
90	110	205	430	650	1220
100	103	195	400	620	1150

*From the National Fuel Gas Code Part 10 Table 10-2*

### Maximum Capacity of Pipe in Thousands of BTU/hr of Undiluted L.P. Gas at 11" W.C.

(Pressure drop of 0.5 Inch W.C.)

PIPE LENGTH (FT)	OUTSIDE DIAMETER, INCHES		
	3/4"	1"	1-1/2"
10	608	1146	3525
20	418	788	2423
30	336	632	1946
40	287	541	1665
50	255	480	1476
60	231	435	1337
70	215	404	1241
80	198	372	1144
90	187	351	1079
100	175	330	1014

*From the National Fuel Gas Code Part 10 Table 10-15*

### PRESSURE REGULATION AND TESTING

The gas pressure to the appliance must be rated for each appliance while the burners are on. A sufficient gas pressure must be present at the inlet to satisfy these conditions. Refer to the table below for correct gas pressure.

Each appliance has been adjusted at the factory to operate with the type of gas specified on the rating plate.

Each oven is supplied with a regulator to maintain the proper gas pressure. **The regulator is essential to the proper operation of the oven and should not be removed.**

DO NOT INSTALL AN ADDITIONAL REGULATOR WHERE THE UNIT CONNECTS TO THE GAS SUPPLY UNLESS THE INLET PRESSURE IS GREATER THAN 14" W.C. (1/2 PSI) (37mbar).

The oven and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig (3.45kPa).

The oven must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas piping system at test pressures equal or less than 1/2 psig (3.45kPa).

Prior to connecting the appliance, gas lines should be thoroughly purged of all metal filings, shavings, pipe dope, and other debris. After connection, the appliance must be checked for correct gas pressure.

### U.S. and Canadian Installations

Installation must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code, NFPA54/ANSI Z223.1-Latest Edition, the Natural Gas Installation Code CAN/CGA-B149.1 or the Propane Installation Code, CAN/CGA-B149.2 as applicable.

### General Export Installations

Installation must conform with Local and National installation standards. Local installation codes and/or requirements may vary. If you have any questions regarding the proper installation and/or operation of your appliance, please contact your local distributor. If you do not have a local distributor, please call Blodgett Combi at 0011-802-658-6600.

GAS PRESSURE		
Model	Gas Type	Inlet Pressure
BLCM-61G	Natural	3.2-8.0" W.C.
	Propane	5.2-14" W.C.
BLCM-101G	Natural	3.2-8.0" W.C.
	Propane	5.2-14" W.C.
BLCM-102G	Natural	3.2-8.0" W.C.
	Propane	5.2-14" W.C.
BLCM-62G	Natural	3.2-8.0" W.C.
	Propane	5.2-14" W.C.
BLCM-202G	Natural	3.2-8.0" W.C.
	Propane	5.2-14" W.C.





# Installation

## Gas Hose Restraint

If the appliance is mounted on casters, a commercial flexible connector with a minimum of 3/4" (1.9 cm) inside diameter must be used along with a quick connect device.

A restraint must be used to limit the movement of the appliance so that no strain is placed upon the flexible connector. The restraint should be fastened to the base frame of the oven as close to the flexible connector as possible. It should be short enough to prevent any strain on the connector. With the restraint fully stretched the connector should be easy to install and quick connect.

The restraint (ie: heavy gauge cable) should be attached without damaging the building. DO NOT use the gas piping or electrical conduit for the attachment of the permanent end of the restraint! Use anchor bolts in concrete or cement block. On wooden walls, drive hi test wood lag screws into the studs of the wall.



### WARNING!!

**If the restraint is disconnected for any reason it must be reconnected when the appliance is returned to its original position.**

### U.S. and Canadian installations

The connector must comply with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69 or Connectors For Moveable Gas Appliances CAN/CGA-6.16 and a quick disconnect device that complies with the Standard for Quick-Disconnect Devices for Use With Gas Fuel, ANSI Z21.41 or Quick Disconnect For Use With Gas Fuel CAN 1-6.9. Adequate means must be provided to limit the movement of the appliance without depending on the connection and the quick disconnect device or its associated piping.

A drip leg must be used at each appliance. Refer to NFPA54/ANSI Z223.1 - Latest Edition (National Fuel Gas Code) for proper drip leg installation.

### General export installations

Installation must conform with Local and National installation standards. Local installation codes and/or requirements may vary. If you have any questions regarding the proper installation and/or operation of your appliance, please contact your local distributor. If you do not have a local distributor, please call Blodgett Combi at 0011-802-658-6600.

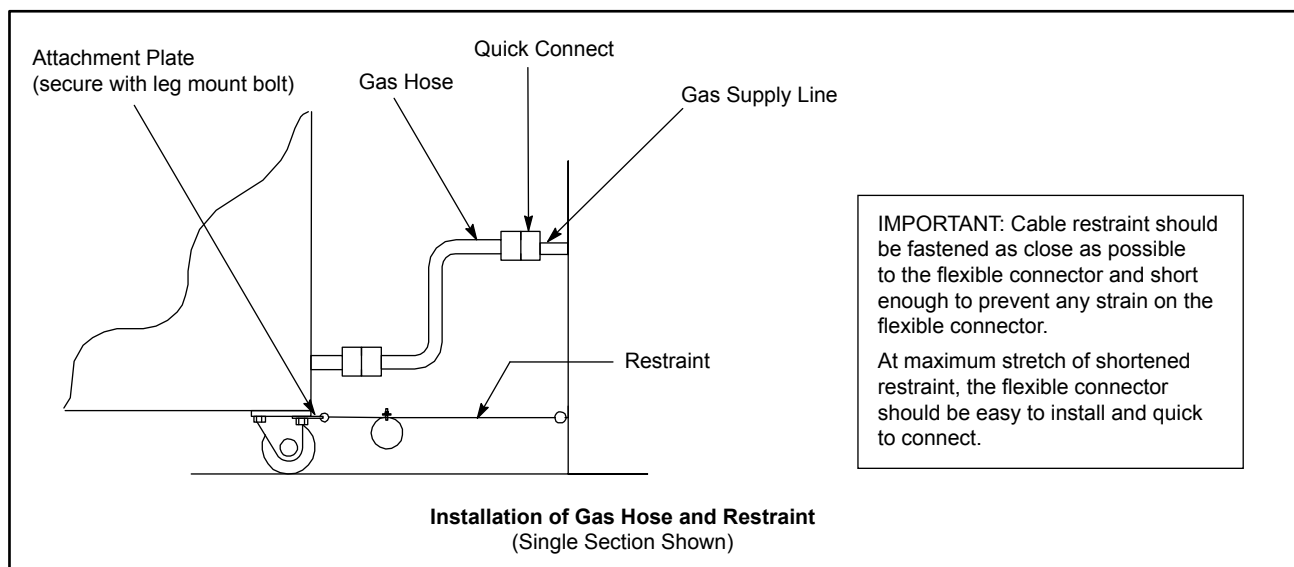


Figure 8



## Final Check Lists



### **WARNING!!**

**Final check list must be performed by a qualified installer only.**

### **OVEN EXTERIOR**

1. Check that the oven has not been damaged in transit (dents, scratches, etc.)
2. Check/adjust the height and check that the oven is placed level (horizontally)
3. Check/adjust oven door

### **CONNECTIONS**

1. Check for correct water connection
2. Turn on water supply
3. Check for leaks
4. Turn off water supply
5. Check and clean dirt filter
6. Turn on water supply again
7. Check hand shower
8. Check for correct electrical connection
9. Check for correct gas connection (if applicable)
10. Check connection to drip tray
11. Check for correct mounting of drip tray
12. Check for correct fall of hose from drip tray, and check for leaks
13. Check for correct exhaust and drain connection
14. Clean the oven
15. Apply steel oil

### **OVEN INTERIOR**

1. Check that filter housing is mounted correctly
2. Check interior light
3. Clean the oven

### **CONTROL**

1. Check and adjust, if necessary, each of the preset values
2. Heat up the oven at 480°F (249°C) for approximately 5 minutes.



# Operation

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## Safety Information for Gas Ovens

The information contained in this section is provided for the use of qualified operating personnel. Qualified operating personnel are those who have carefully read the information contained in this manual, are familiar with the functions of the oven and/or have had previous experience with the operation of the equipment described. Adherence to the procedures recommended herein will assure the achievement of optimum performance and long, trouble-free service.

Please take the time to read the following safety and operating instructions. They are the key to the successful operation of your Blodgett oven.



### SAFETY TIPS

#### For your safety read before operating

What to do if you smell gas:

- DO NOT try to light any appliance.
- DO NOT touch any electrical switches.
- Use an exterior phone to call your gas supplier immediately.
- If you cannot reach your gas supplier, call the fire department.

#### What to do in the event of a power failure:

- Turn all switches to off.
- DO NOT attempt to operate the oven until the power is restored.

*NOTE: In the event of a shut-down of any kind, allow a five (5) minute shut off period before attempting to restart the oven.*

#### General safety tips:

- DO NOT use tools to turn off the gas control. If the gas cannot be turned off manually do not try to repair it. Call a qualified service technician.
- If the oven needs to be moved for any reason, the gas must be turned off and disconnected from the unit before removing the restraint cable. Reconnect the restraint after the oven has been returned to its original location.
- DO NOT remove the control panel cover unless the oven is unplugged.



## Manual Control Description

1. MAIN POWER SWITCH - controls power to the oven
2. TEMPERATURE KEY - press to set the cook temperature
3. TIME KEY - press to set the cook time
4. PROBE KEY - press to activate core probe
5. PROGRAM KEY - press access and program product recipes. Control stores up to 50 recipe programs with 10 cooking stages each.
6. STAGE KEY - use to enter stage information during product programming
7. ALARM KEY - press to silence alarms
8. HOT AIR KEY - press to select Hot Air mode
9. COMBI KEY - press to select Combi 1, Combi 2 or Retherm mode
10. STEAM KEY - press to select Steam mode
11. VENT KEY - press to open or close the vent
12. FAN KEY - press to change the fan speed. The fan is reversible with 9 speeds for optimum baking and roasting results
13. SELECTION DIAL - turn to enter data into control
14. START/STOP KEY - press to begin or cancel a cook cycle

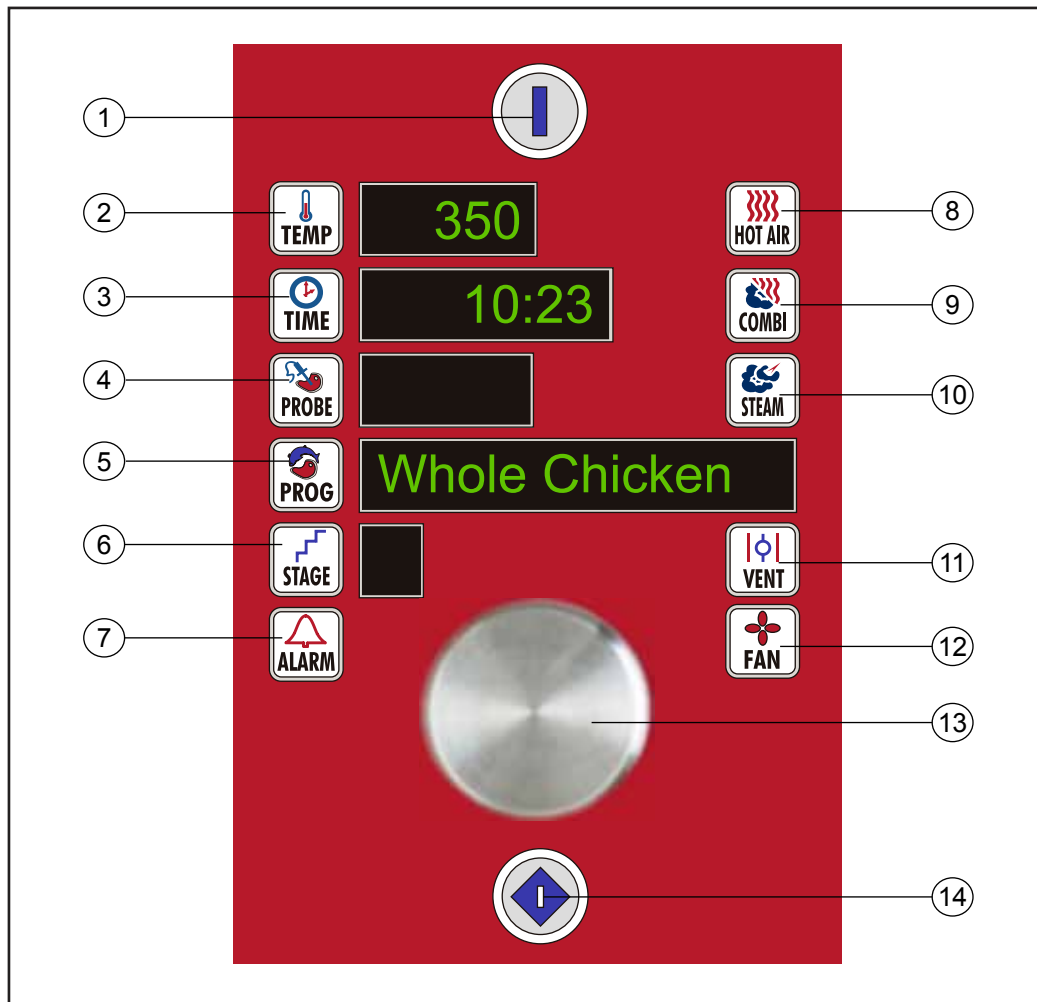


Figure 9



# Operation

## Manual Cooking

### MANUAL COOKING

1. Press the desired mode key on the right side of the control. The LED next to the key lights and the mode name is displayed.

To select Reheating, press the COMBI key once.

To select Combi 1 (30-40% humidity), press the COMBI key twice.

To select Combi 2 (60-80% humidity), press the COMBI key three times.

2. Press the TEMP key. Turn the dial to enter the desired cook temperature. Press the TEMP key again to save the cook temperature.

*NOTE: If steam mode is selected, the temperature is automatically set to 212°F (100°C).*

3. Press the TIME key. Turn the dial to enter the desired cook time. Press the TIME key again to save the cook time.

For continuous cooking, turn the dial until the display reads --:--. Continuous manual cooking allows the oven to run continuously at the set temperature in the set cooking mode.

*NOTE: Time is displayed in hours:minutes.*

4. Press the FAN key. Turn the dial to enter the desired fan speed. Press the FAN key again to save the fan speed.

*NOTE: The fan cannot be set below 50% at temperatures above 390°F (200°C)*

5. The vent position can be set when cooking in Hot Air mode only.

Press the VENT key to open the vent. The LED next to the key lights. Press the VENT key again to close the vent. The LED next to the key goes out when the vent is closed.

6. Press the START/STOP key to begin the cook cycle.
7. If you are cooking in Hot Air mode, it is possible to inject moisture at any time during the cook cycle. Press and hold the STEAM mode key. Steam is injected until the key is released.
8. At the end of the cook cycle, an alarm sounds and the display flashes. Push the START/STOP key or open the door to silence the alarm.

*NOTE: The alarm will not sound during a continuous manual cook.*

### CORE PROBE COOKING

1. Follow the instructions for Manual Cooking to set the mode, cook temperature, fan speed and vent position.
2. Press the CORE PROBE key. Turn the dial to enter the desired product core temperature. Press the CORE PROBE key again to save the core temperature.

*NOTE: When the CORE PROBE key is selected the cook time automatically changes to --:--.*

3. Insert the probe into the product.

The core temperature probe has several measuring points on its tip. The computer calculates an average temperature thus ensuring that the core temperature is 100% correct.

The probe should be inserted vertically in the thickest part of the product.

When preparing products of different sizes, insert the sensor in the smallest product and then move it to a larger product when the core temperature alarm sounds.

4. Load the product and close the door. Plug the core probe into the oven.

*NOTE: Meat probe on mini combi models are internal and do not need to be plugged into the oven.*

5. Press the START/STOP key to begin the cook cycle.
6. When the product has reached the core temperature the alarm sounds. Push the START/STOP key or open the door to silence the alarm.

### PROGRAMMING THE CONTROL

The Blodgett manual control stores up to 10 recipe programs with 3 stages per product.

#### Naming the Program

1. Press the PROGRAM key. Turn the dial until a free recipe is displayed.
2. Press and hold the PROGRAM key for 5 seconds. The first letter flashes. Turn the knob until the desired letter is displayed. Press the program key to advance to the next digit.
3. Repeat step 2 until the product name is entered.
4. Press and hold the PROGRAM key to save the name.

#### Program Product Stages

*NOTE: Blodgett recommends programming a preheat with alarm for the first stage. To program an alarm, press the ALARM key.*

1. Press the STAGE key. Stage 1 is displayed.
2. Press the desired mode key on the right side of the control. The LED next to the key lights and the mode name is displayed.

To select Reheating, press the COMBI key once.

To select Combi 1 (30-40% humidity), press the COMBI key twice.

To select Combi 2 (60-80% humidity), press the COMBI key three times.

3. Press the TEMP key. Turn the dial to enter the desired cook temperature. Press the TEMP key again to save the cook temperature.

*NOTE: If steam mode is selected, the temperature is automatically set to 212°F (100°C).*

4. Press the TIME key. Turn the dial to enter the desired cook time. Press the TIME key again to save the cook time.

*NOTE: Time is displayed in hours:minutes.*

5. Press the FAN key. Turn the dial to enter the desired fan speed. Press the FAN key again to save the fan speed.

*NOTE: The fan cannot be set below 50% at temperatures above 390°F (200°C)*

6. The vent position can be set when cooking in Hot Air mode only.

Press the VENT key to open the vent. The LED next to the key lights. Press the VENT key again to close the vent. The LED next to the key goes out when the vent is closed.

7. Press the STAGE key to advance to stage 2. Repeat steps 2-7 for additional stages.

*NOTE: For recipes shorter than 10 stages, delete the current step by pressing STEP and ALARM simultaneously for 2 seconds.*

8. Press and hold the PROGRAM key to save the product program.

#### Cooking with a Program

1. Press the PROGRAM key. Turn the dial to display the product recipe name.
2. Press the START/STOP key.
3. If an alarm is used, press the ALARM key to turn the alarm between steps off.
4. If you are cooking in Hot Air mode, it is possible to inject moisture at any time during the cook cycle. Press and hold the STEAM mode key. Steam is injected until the key is released.
5. When the program has started, you can change time, temperature, core temperature, fan speed and vent position. These changes will only be active in the current run.

The display shows the total time remaining. To view the time remaining in the current step, press the TIME key.

6. At the end of the programmed cook cycle, an alarm sounds and the display flashes. Push the START/STOP key or open the door to silence the alarm.



# Operation

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## Cooking Tips

### PREHEAT

**485-575°F (250-300°C)**

**Blodgett recommends always preheating the oven before cooking.**

Preheat is used to heat an empty oven. To set the pre-heat mode, select the Hot Air key and enter a temperature above 485°C (250°C). PREHEAT is displayed. The time can be set to maximum of 15 minutes. The timer will not begin the countdown until the desired preheat temperature has been reached.

*NOTE: Continuous operation is not available in preheat.*

### HOT AIR MODE

**85-485°F (30-250°C)**

- The hot air operating mode can be used for roasting, grilling, baking and gratinating.
- Blodgett recommends that you keep the vent open when roasting products at very high temperatures
- It is possible to roast breaded products such as breaded fish and breaded pork chops. For maximum effect, use enameled cast iron pans or silicone-coated baking sheets.

### COMBI MODES

**85-485°F (30-250°C)**

- COMBI 1 is recommended for the roasting of all kinds of meat cuts. The pores of the meat close quickly, which prevents the juice from leaving the meat. For long roast times at 175-265°F (80-130°C), COMBI STEAMING 1 helps reduce shrinkage.
- COMBI 2 is recommended for roasts that should be well-done, and if you want to use the juice for gravy. At temperatures higher than 335°F (170°C), the crust of the meat becomes nice and brown.

### RETHERM MODE

**85-355°F (30-180°C)**

- Retherm is a very gentle process and therefore very suitable for reheating.
- Use a core temperature probe to reach the perfect end temperature.
- For the reheating of sous-vide products, etc., follow the product reheating recommendations. Sous-vide products should not be covered.

### STEAM MODE

**85-250°F (30-120°C)**

- Blodgett recommends pre-steaming the oven for 8 minutes before loading product.
- Steaming at 212°F (100°C) is recommended for all kinds of hard vegetables, rice and pasta.
- Low temperature steaming at 85-211°F (70-80°C) is recommended for fish.
- Forced steaming at 250°F (120°C) is an aggressive and very rapid process, which should be used with care.



## Cleaning & Preventative Maintenance

### DAILY CLEANING

Daily cleaning of your Combi oven is essential for sanitation, and to ensure against operational difficulties.

#### Cleaning the Exterior

1. The exterior of the appliance may be cleaned and kept in good condition with a light oil. Saturate a cloth and wipe the appliance when it is cold; wipe dry with a clean cloth.



#### WARNING!!

**DO NOT spray the outside of the appliance with water or clean with a water jet. Cleaning with a water jet can impregnate chlorides into the stainless steel, causing the onset of corrosion.**

### RECOMMENDED OVEN CLEANERS

VENDOR	PRODUCT NAME
1st AYD Corporation	Kombi-Klean Oven, Grill & Fryer Cleaner
Alco Chemical	350 Ultra Cycle
Daley International	Oven & Grill Cleaner
Ecolab	Keystone Oven Cleaner
	Oven Cleaner Power
	Grease Cutter Plus
	Specialty Oven Cleaner
	Ecotemp Ultra Kleene
	Proforce Oven Grill & Fryer Cleaner
Johnson Diversey	Suma Grill D9
Kay Chemical	Empire Inside/Outside Degreaser
Parkside Pro Products	Vestec 550
PDQ Manufacturing	Comi-Clean
Performance Food Group	First Mark All Temp Dish Machine Detergent
U.S. Chemical	Heavy Duty Oven & Grill Cleaner

### Cleaning the Interior - 61, 101, 102 & 202 Models only

*NOTE: DO NOT use corrosive cleaners not intended for oven cleaning on your Combi oven.*

Blodgett recommends the following products for cleaning and rinsing of your Blodgett Combi oven. If you choose to use products other than what Blodgett recommends, please have your supplier send us the MSDS sheet on the proposed alternate so we can ensure it meets our standards. Non approved products can cause harm to your unit and can potentially void your warranty.

1. Open the oven door.
2. Use the attached spray hose, located beneath the control, to clean the front drip tray. Water will run to the drain in the oven cavity.

### RECOMMENDED RINSE AIDS

VENDOR	PRODUCT NAME
Alco Chemical	320 Rapid Rinse
Ecolab	Keystone Liquid Rinse Additive
	Oven Rinse Power
	Esteem Dry-All
	Eco Temp Ultra Dry
	Specialty Oven Rinse RTU
Johnson Diversey	Specialty Oven Rinse
	Suma Maro A8.8
Parkside Pro Products	Suma Nova L6
	Vestec 510
PDQ Manufacturing	Combi-Rinse
Performance Food Group	First Mark Kleer Kwick Plus Quick Dry Rinse Aid
U.S. Chemical	Heavy Duty Rinse Agent



# Maintenance

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## Cleaning & Preventative Maintenance

Run the CombiWash automatic cleaning cycle as follows:

*NOTE: BLCM-23, BLCM-6 and BLCM-10 do not include CombiWash. See below for cleaning instructions.*

1. Check that the oven cleaner and rinse agent containers are both full.
2. Press the PROGRAM key. Turn the dial until COMBI-WASH is displayed.
3. CombiWash features four different cleaning cycles. Press the STAGE key to select the desired cleaning cycle.

Cycle 1 (44 minutes)

Cycle 2 (1 hour)

Cycle 3 (1 hour, 49 minutes)

Cycle 4 (2 hours, 38 minutes)

*NOTE: Use cycle 1 or 2 after steaming and roasting at low temperatures. Use cycle 3 or 4 after steaming and roasting at high temperatures.*

4. Press the Start/Stop key to initiate the clean cycle.
5. If the cavity temperature is above 175°F (80°C), the oven will automatically enter cool down. When the cavity is below 175°F (80°C) the CombiWash cycle begins.
6. The control counts down the time remaining in the wash cycle.
7. When the wash cycle is over, the oven automatically switches to an energy saving standby mode.

## Cleaning the Interior - BLCM-23, BLCM-6 & BLCM-10 Models only

1. Cool the oven cavity to 175°F (80°C).
2. Run the oven in Combi 2 for 15 minutes at 175°F (80°C).
3. Following the directions on your oven cleaner, apply to the oven liner, racks, etc.
4. Close the door and allow the cleaner to work for 10 minutes.
5. Run the oven in Combi 2 again for 15 minutes at 175°F (80°C).
6. Rinse the oven interior with the hand shower.





## Cleaning & Preventative Maintenance

### WEEKLY CLEANING

In addition to the daily cleaning, it is necessary to clean the control filter and behind the fan guard on a weekly basis. This is necessary for proper functioning of the oven. Scale will build up on the fan and heat source leading to a less efficient oven.

#### Cleaning the Control Filter

The control filter is located below the control compartment, in front of the spray hose.

1. To remove, pull down on the black knob on the left of the filter.
2. Clean the filter with soap and water.
3. Reinstall the filter. Press up on the filter until the back of the knob is inserted into the hole in the bottom of the oven.
4. Push up on the center of the knob to expand the back of the knob securing the filter.

#### Cleaning Behind the Fan Guard

1. Loosen the two screws and on the fan guard (or baffle).
2. Swing the baffle forward.
3. Thoroughly spray cleaner onto the fan and heat source. Place the oven in the steam mode for approximately 10 minutes.
4. After ten minutes, rinse the cleaner off. Return the fan guard to the closed position. Rotate the two screws to secure the fan guard.

### PREVENTIVE MAINTENANCE

The best preventive maintenance measures are the proper initial installation of the equipment and a program for cleaning the appliance routinely. The Oven/ Steamer requires no lubrication. Contact the factory, the factory representative or a local Blodgett Combi service company to perform maintenance and repairs should they be required.

#### Deliming - BCM Only

The control keeps track of boiler usage between descaling. When the oven has reached 95% of the time the control warns the operator that the oven needs to be delimed. **This is a warning only, the oven can be used all day before deliming.**

#### Deliming the Oven

1. Be sure the container delivering the deliming agent to the appliance is full. Be sure to use a non-diluted deliming agent.

VENDOR	PRODUCT NAME
Ecolab	Keystone Lime-a-way scale remover
	Calibre
Parkside Pro Products	Vestec 691

2. Press the PROGRAM key. Turn the dial until DELIMING is displayed.
3. Press the START/STOP key.
4. The remainder of the process is automatic. The control displays the deliming steps as they occur.



Figure 10

5. The oven can be delimed at any time. Simply turn the dial to the program DELIMING and press the Start/ Stop key.